of a safety match, kinnate quinia, salicin, sugar, etc. Try sodium benzene sulphonate, hippuric acid, and anthracene with polarized light. Hippuric acid can be made to vary its crystal forms. If dissolved in alcohol and warmed, on drying they resemble the leaves of flowers. If breathed on during cooling they take the form of rosettes. Ortho-nitro-phenol is a complex compound of the "Ring" series and if very thin on a slide its color effects are very beautiful. Coumarin shows another type.

V. A. L.

MEASURING CARBON DIOXIDE PRODUCED BY PROTOZOA

Lund (Baltimore Meeting Am. Soc. Zool. 1918) has devised a simple procedure to determine the production of CO^2 by small organisms. A wide mouth glass-stoppered bottle is used, from the stopper of which is suspended a small flat stender dish containing the organisms. A small quantity of weak $Ba(OH)_2$ is placed on the bottom of the bottle. This absorbes the CO_2 which gets into the bottle. By proper controls the amount due to the animals can be determined.

It was found by using small quantities of some substance, as Na_2CO_3, which would set free known quantities of CO_2, that only about 5% of error existed in measuring the quantity of CO_2 set free by an acid from even one milligram of Na_2CO_3. Similar accuracy is insured for the production of the organisms.

METHOD FOR DEMONSTRATING GLYCOGEN IN TISSUES

Gage (J. Comp. Neur. June, 1917) summarizes the methods used by him in his studies of the distribution of glycogen in Vertebrates.

1. Fix in alcohol (67-100%). A medium is necessary which does not dissolve the very changeable glycogen. While other agents may be used, none is so generally satisfactory.

2. Imbed either in paraffin or collodion, or the combined method may be used.

3. For staining iodin is the only reliable and satisfactory agent. An alcoholic iodin stain was found most satisfactory (95% alcohol, 150 cc.; water, 150 cc.; 10% alcoholic solution of iodine, 15 cc.; iodid

of potassium, 3 grams; sodium chloride, 1.5 grams). Spread the sections with the iodine stain instead of water. The glycogen stains a mahogany red, which is permanent in the paraffin.

4. If permanent mounts for high power work are needed, the sections may be immersed in the iodine stain for a few minutes, dried thoroughly and then deparaffined by xylene. They may be mounted in melted yellow vaseline.